

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>CZ03-106</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/004261</b>	International filing date ( <i>day/month/year</i> ) <b>26.03.2004</b>	Priority date ( <i>day/month/year</i> ) <b>28.03.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>G01N21/21, G01J4/04</b>		
Applicant <b>CITIZEN WATCH CO., LTD.</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <u>10</u> sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/004261

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-4, 7, 10-35 as originally filed/furnished
- pages\* 5/1, 6, 8 received by this Authority on 28.01.2005
- pages\* 5, 9-9/1 received by this Authority on 27.04.2005
- ☒ the claims:
- nos. 4-12, 14-15 as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 2-3, 13 received by this Authority on 28.01.2005
- nos.\* 1, 16 received by this Authority on 27.04.2005
- ☒ the drawings:
- sheets figures 1-19 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims <u>1-16</u>	YES
		Claims _____	NO
	Inventive step (IS)	Claims <u>1-16</u>	YES
		Claims _____	NO
	Industrial applicability (IA)	Claims <u>1-16</u>	YES
		Claims _____	NO
2.	Citations and explanations (Rule 70.7)		
	(1) Novelty and Inventive Step		
	Document 1: JP 2002-277387 A (Citizen Watch Co., Ltd.), 25 September 2002		
	Document 2: JP 6-118359 A (Matsushita Electric Industrial Co., Ltd.), 28 April 1994		
	<u>Claims 1 to 16</u>		
	<p>The inventions set forth in claims 1 to 16 are novel and involve an inventive step in relation to the documents that are cited in the international search report.</p> <p>In particular, it would not be easy for a person skilled in the art to conceive of the feature wherein the first and second phase modulation sections "are configured so that changes in the amounts of phase modulation cancel one another out" because document 1 (which describes an optical rotation measurement device employing liquid crystal elements that implement phase modulation) does not disclose phase modulation sections that fulfill such a condition, and because the feature in question is not disclosed in document 2, which describes</p>		

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

implementing phase modulation by means of a pair of liquid crystal cells (in document 2, the sum of the amounts of phase modulation is applied to the polarized light that traverses the pair of liquid crystal cells).

(2) Industrial Applicability

The inventions set forth in claims 1 to 16 clearly fulfill the requirement of industrial applicability.

**Box No. VIII** Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

(1)

Claims 1, 2 and 12 do not stipulate that the phase modulation means are liquid crystal elements; however, it is considered to be impossible to use phase modulation means other than liquid crystal elements in the light of the disclosures in the embodiments and on page 4 (lines 15 to 26) of the description of the present application. Such being the case, claims 1, 2 and 12 are not fully supported by the description.

(2) In cases when claim 15 does not indirectly cite claim 2, the relationships between the "offset signal" and the other technical features are not clear from the disclosure in claim 15.